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09/598,240	06/21/2000	Norman D. Geddes	ASI0002-US	7459

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EXAMINER

IRSHADULLAH, M

ART UNIT	PAPER NUMBER
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3623

DATE MAILED: 09/24/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/598,240

Applicant(s)

GEDDES, NORMAN D.

Examiner

M. Irshadullah

Art Unit

3623

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 June 2000 and 28 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5-10.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities:
 - a) Page 14, line 1: "304" should be "303";
 - b) Page 30, line 9 through page 36, line 19, all numbers, like "307" on page 30, line 9, should read as "407" etc.

The above corrections are just samples, Applicant is requested to review the specification more thoroughly to ensure that all typographical errors and other inconsistencies are rectified.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless:

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-3, 5-15, 17-21 and 23-28 are rejected under 35 U.S.C. 102(e) as being anticipated by Friedman et al (US Patent 5,995,959).

Friedman et al show:

Claim 1. A method for assisting a purchaser in conducting electronic commerce on a computer network, the method comprising:

Art Unit: 3623

a) determining a goal for a purchaser, the goal pertaining to a commerce domain (Col. 9, lines 52-56 and col. 15, lines 15-26, wherein "searching from a set of operators describing available information sources to solving user's query {a goal}-col. 9, lines 53-55-in terms of said information sources" point to "determining a goal" and "car domain-col. 15, line 21 and People domain-col. 15, line 25" are "domains" relating to trades or commerce); and

b) using a knowledge base to create one or more partial order plans to satisfy the determined goal, the knowledge base having embodied therein information pertaining to the domain of the goal (Fig. 2 {28-30}, col. 8, lines 48-50 and col. 16, lines 17-62, wherein "plan specifying access to 28-30" is employing or using 28-30 which are information sources or knowledge bases-col. 8, 48-50". The information sources or knowledge bases 28-30 are being searched by cited "partial order planner" to develop or create a "partial order plan" as indicated by recitation of lines 58-62, col. 16, and as discussed above, 28-30 comprise or embody information relating to above discussed goal).

Claim 2. The method of claim 1, wherein the plan incorporates a list of items necessary to carry out the determined goal (Table A, col. 9, lines 32-50, wherein said table shows steps or items needed or necessary to perform or carry out for arrive at or determine above discussed goal).

Art Unit: 3623

Claim 3. The method of claim 1, wherein the act of creating a plan to satisfy the determined goal is performed using a partial order planner (Col. 16, line 23 read with lines 17-22).

Claim 5. The method of claim 1, wherein the knowledge base includes one or more plan and goal graphs (Fig. 2 {21-25}, col. 7, line 23 through col. 8, line 54, wherein "determining or representing plan 25-lines 45-46" points to the presence of "a plan" and its "representation in terms of relational schema-lines 39-43" inferring reference's capability for providing diagrammatic or graphic presentation" and as indicated by bi-directional arrows (Fig. 2 {26 and 28-30}), said information is comprised in information sources or knowledge bases 28-30).

Claim 6. The method of claim 1, wherein the knowledge base includes one or more concept graphs (Col. 4, line 59 through col. 5, line 9 and Tables A, B, C, cols. 9, 10 and 11, wherein "A relational schema comprising, head, names of the schema, attributes or arguments indicating types of facts-col. 4, line 65 to col. 5, line 1" and Tables A, B, C comprising pseudo {or conceptual} codes-col. 9, line 32, col. 10, line 45, col. 11, line 27, represent "concept graphs").

Claim 7. A buyer agent for conducting electronic commerce across a computer network, the buyer agent comprising:

a) a knowledge base including information about one or more domains (Fig. 2 (28-30), col. 8, lines 34-54 and col. 15, lines 21-26, wherein "information sources 28-30" are "knowledge bases" and comprise information relating to various arena or domains, such as "The car domain-col. 15, line 21, and The people domain-col. 15, line 25"); and

b) an inference engine with access to the knowledge base (Table C, col. 11, line 7 through col. 12, line 44, wherein sub-procedure FindSolutions functioning as "inference engine as indicated by the recitation "This section explains how sub-procedure FindSolutions tests each ordered sequence found to determine whether it can be elaborated into one or more solutions to the input query-lines 10-13),

c) wherein the inference engine uses the information in the knowledge base to create a plan for conducting electronic commerce (Above discussed FindSolutions or inference engine employs or uses above discussed information sources or knowledge bases 28-30 and "takes a sequence and generates or creates the set of all plans-col. 11, lines 51-53" and said plans relate to above discussed trade or commerce arena or domain).

Claim 8. The buyer agent of claim 7, wherein the knowledge base includes one or more plan goal graphs (See discussion of applicant's claim 5 above).

Claim 9. The buyer agent of claim 7, wherein the knowledge base includes one or more concept graphs (See discussion of applicant's claim 6 above).

Art Unit: 3623

Claim 10. The buyer agent of claim 9, wherein the inference engine includes a partial order planner and wherein the inference engine uses the partial order planner to create one or more plan instances (As discussed above, FindSolutions being a sub-procedure of the reference procedure "occam-col. 9, lines 32-50", functions as "inference procedure or engine" would include "partial order planner-col. 16, line 23", and would employ or use it to generate or create above discussed all plans or one or more instances thereof).

Claim 11. The system of claim 10, wherein the inference engine manages life cycle states of the one or more plan instances according to a commitment level of the partial order planner (Col. 2, lines 38-41 and col. 16, lines 22-25. Above discussed FindSolutions {or inference engine} would control or manage "information state or life cycle states as indicated by "information collected at a particular stage in potential execution of a potential query plan-lines 39-41, wherein "particular stage in potential execution of a potential query plan" inferring "life cycle" of the plan and recitation of "sound, complete, free of threats" indicating claimed "commitment level" of cited partial order planner. Moreover, "commitment strategies are known since 1991 (col. 18, {19} lines 40-42), inclusion of which would be considered inherent at the time of applicant's invention).

Claim 12. The system of claim 11, wherein the inference engine manages monitoring of the situation using the one or more concept graphs according to the life

Art Unit: 3623

cycle states of the one or more plan instances (Col. 12, lines 37-39, wherein "checking" infers "monitoring" and it would allow user to check or monitor claimed a thing or "situation" employing above discussed concept graph based upon the above discussed states or life cycles of cited plans or instances thereof).

Claim 13. The system of claim 12, wherein the inference engine determines what further processing is needed by the partial order planner based on the monitoring of the situation (Col. 12, lines 37-39, wherein "checking whether plan is redundant and returning it to solution only if it is not redundant" inferring "taking further action {returning to solution} if plan were not redundant, and it would depend on above discussed checking or monitoring).

Claim 14. The buyer agent of claim 7, wherein the knowledge base includes one or more scripts, each of the one or more scripts comprising a sequence of partially specified primitive actions (Col. 15, Table 1, wherein entries of the table point to availability of "texts or scripts" including claimed series or sequence of partially assigned or specified actions that would remain same (primitive actions)).

Claim 15. The buyer agent of claim 7, wherein the inference engine includes a partial order planner (See discussion of applicant's claim 10 above).

Claim 17. The buyer agent of claim 7, wherein the buyer agent is an Internet web browser plug-in (Col. 15, lines 25-26, wherein "internet white page" inferring reference's capability to employ "web" technique and a "browser" is an essential element of it).

Claim 18. The buyer agent of claim 17, wherein the buyer agent further includes a monitoring component, the monitoring component recording the actions of a user within the Internet web browser (Col. 12, line 38, wherein "checking" points to "monitoring" and a user would use it for claimed purpose).

Claim 19. A method for assisting a purchaser in conducting electronic commerce on a computer network, the method comprising:

A) using an intent interpreter to determine a goal for a purchaser, the goal pertaining to a commerce domain (Col. 7, lines 50-51, wherein "procedural interpreting" inferring the provision of an "interpreting or intent interpreting" function and about "to determine a goal for a purchaser, the goal pertaining to a commerce domain" see discussion of applicant's claim 1a) above); and

b) using a knowledge base to create one or more partial order plans to satisfy the determined goal, the knowledge base having embodied therein information pertaining to the domain of the goal (See discussion of applicant's claim 1b) above).

Claim 20. The method of claim 19, wherein the plan incorporates a list of items necessary to carry out the determined goal (See discussion of applicant's claim 2 above).

Claim 21. The method of claim 19, wherein the act of creating a plan to satisfy the determined goal is performed using a partial order planner (See discussion of applicant's claim 3 above).

Claim 23. The method of claim 19, wherein the knowledge base includes one or more plan and goal graphs (See discussion of applicant's claim 5 above).

Claim 24. The method of claim 19, wherein the knowledge base includes one or more concept graphs (See discussion of applicant's claim 6 above).

Claim 25. A buyer agent system comprising:

- a) a plurality of intelligent agents, each of the plurality of intelligent agents (Col. 1, line 34 recited with lines 14-17 and col. 9, line 32 through col. 12, line 39, wherein "agents" are "intelligent agents", since the are automated computerized processes or procedures, by this token reference's procedure "occam" and sub-procedures "InstantiateOp and FindSolutions", col. 11, Table A are intelligent agents) including:
 - a) a knowledge base including information about one or more domains (See discussion of applicant's claim 7a) above);

b) an inference engine with access to the knowledge base, the inference engine including a partial order planner (See discussion of applicant's claims 7b) and 10 above);

d) a data management system that collects and distributes data (Fig. 1 {2, 8}, col. 4, lines 47-50); and

e) a graphical user interface system that displays information to a user (Fig. 1 {1}, col. 3, lines 47-51).

Claim 26. The buyer agent system of claim 25, wherein the knowledge base includes one or more concept graphs (See discussion of applicant's claim 6 above).

Claim 27. The buyer agent system of claim 26, wherein each agent of the plurality of intelligent agents determines the intentions of one or more users and wherein the data management system of a first agent of the plurality of intelligent agents shares data with a second agent of the plurality of intelligent agents representing the determined intentions of the one or more users to facilitate collaboration (See discussion of applicant's claims 25a), 19a) above and user would employ cited intelligent agents of 25a) to find or determine intentions using intent interpreter of 19a) for claimed purposes).

Claim 28. The buyer agent system of claim 27, wherein the system uses the shared data to automatically detect conflicts between the one or more users (Col. 14,

lines 22-30, wherein "executing the same operator twice not returning new tuples-lines 26-29" inferring availability of a function which checks for or detects duplication or conflict).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 4, 16 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Friedman et al (US Patent 5,995,959) in view of Shasha (US Patent 5,809,212).

In the following claims:

Claims 4, 16 and 22. The method of claims 1/7/19, wherein the act of creating a plan to satisfy the determined goal is performed using a non-monotonic truth maintenance system.

Friedman et al teach:

creating a plan to satisfy the determined goal (Col. 2, lines 52-57),

Friedman et al do not teach:

a non-monotonic truth maintenance system.

However, Shasha teaches the same (Col. 3, lines 38-42). Friedman et al and Shasha both employ AI procedures to solve problems relating to various commercial areas or domain. While Friedman et al teach creating plan for solving a user's query or problem

concerning trade, such as car buying, Shasha teaches non-monotonic truth maintenance system.

It would have been obvious to one of ordinary skill in the relevant art at the time of applicant's invention to incorporate Shasha's feature into Friedman et al's invention, thereby providing a system for an improved representation of networks of facts, belief and expectations so that a user would acquire qualified statements of knowledge from the system as desired.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

A) Kiss et al., US Patent 6,484,155 B1. Knowledge Management System For Performing Dynamic Distributed Problem Solving.

B) Wagner, US Patent 6,092,102. System And Method For Notifying Users About Information Or Events Of An Enterprise.

C) Chen et al., US Patent 6,076,099. Method For Configureable Intelligent-Agent-Based Wireless Communication System.

D) Hoffberg et al., US Patent 5,901,246. Ergonomic Man-Machine Adaptive Pattern Recognition Based Control System.

F) Chan et al., US Patent 5,778,150. Flexible Procedural Attachment To Situate Reasoning System.


G) Erman et al., US Patent 4,658,370. Knowledge Engineering Tool.


Art Unit: 3623

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to M. Irshadullah whose telephone number is (703) 308-6683. The examiner can normally be reached on Monday-Friday 11:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tariq Hafiz can be reached on (703) 305-9643. The fax phone numbers for the organization are (703) 872-9326 for regular communications and (703) 305-872-9327 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.


M. Irshadullah
September 10, 2003


Susanna Diaz
Primary Examiner
Art. 3623